



# Chemical Agent Resistant Coating (CARC)

Personnel who paint vehicles indoors must be properly fitted with a respirator to prevent exposure to the chemicals.

## WHAT IS CARC?

CARC is a paint used on military vehicles. This coating system provides surfaces that are easily and effectively decontaminated after exposure to liquid chemical agents. The CARC system contains solvents and isocyanate (HDI). Exposure to CARC paint may occur during indoor painting operations if proper personal protective (PPE) equipment and engineering controls are not instituted.

## WHY SHOULD I BE CONCERNED ABOUT CARC?

HDI, one of the components in CARC paint, is highly irritating to the skin and mucous membranes. People suffer from itching and reddening of the skin, burning sensation of the throat and nose, and watering of the eyes. These acute effects subside when the person leaves the exposure area. If the concentrations of HDI are sufficiently high, pulmonary symptoms may occur. These symptoms include coughing, shortness of breath, pain when breathing, increased sputum production, and chest tightness. Prompt medical attention is required in these cases.

In a **small** percentage of people HDI may cause a process called "sensitization". This is similar to a reaction one may suffer if allergic to certain foods, medications or bee stings. This allergic-like reaction, when it occurs, would happen after at least two exposures to CARC. The first exposure to CARC paint is when the sensitization process occurs. Allergic-like symptoms occur at a subsequent exposure. Even low concentrations may cause coughing, wheezing, tightness in the chest, and shortness of breath. Anyone that suffers any type of allergic-reaction should seek medical care immediately.

The solvents used in painting operations can be inhaled or absorbed through the skin. Solvent vapors may produce eye irritation, dizziness, nausea, and head-

aches. Again, these acute effects subside when the person leaves the exposure area. Painters who do not utilize personal protective equipment and who are exposed to solvents for a long period of time may suffer neurological problems such as irritability, depression or an inability to concentrate. Personnel exposed to solvents on their skin may develop a skin condition called dermatitis. The skin will become reddened and dry. Itching and painful cracks in the skin also occur.

## HOW CAN I PREVENT EXPOSURE TO CARC PAINT?

Personnel who use CARC for spot painting need plenty of ventilation. If possible, paint outside but out of the direct sun. If you must paint inside a building, paint in a bay with doors open on each end. Your local Industrial Hygienist can measure the airflow to see if you have adequate ventilation prior to the beginning of work operations. Use a respirator to remove solvents in the air unless your local Industrial Hygienist or Preventive Medicine personnel have said that use of a respirator is not necessary. If a respirator is deemed necessary, individuals must receive medical clearance from and Occupational Health Nurse. Prior to wearing the respirator personnel must receive training and fit testing from local Industrial Hygienist or Safety personnel. Once CARC paint has dried on a military vehicle there is no health risk unless subsequent operations, such as grinding or torching, are conducted. Contact your local Industrial Hygienist, Safety representative or Occupational Health Nurse for further information.